



Alfonso Ortega
Professor/titular lecturer in
Languages and Systems
Dept. Computer Science
High Polytechnic School



ACADEMIC TRAINING

- Computer science (1994, Universidad Politécnica de Madrid)
- PhD thesis in Computer Science: (2000, Universidad Autónoma de Madrid) Equivalences among some complex systems: Cellular Automata, Lindenmayer Systems and Fractals
Mark: “Sobresaliente cum laude por unanimidad”

PROFESSIONAL EXPERIENCE

The area in which I am mainly concerned in my research and teaching activities is the study of different aspects of bio-inspired models of computation (Evolutionary computation, cellular automata, new models of bio-inspired computers) and mainly from the viewpoint of offering the community programming tools for using them to tackle real life problems among which one specially relevant is strong and ultra strong machine learning.

I have to highlight that teaching is a very important activity for me.

More specifically, my recent work has been focused in the development of programming environments for Psystems, NEPs, and grammar systems, including the design of textual and visual programming languages integrated in user friendly environments, and the implementation of the simulators of these models to be run on different platforms (including massive parallel machines).

I am also concerned with other aspects of these models, for example, models of different tissular phenomena by means of extensions of cellular automata (cellular pots model and quantum cellular automata) I am also involved in the proposal of new families of more efficient and easy to use evolutionary algorithms.

I am currently moving my research focus to discrete strong and ultra strong machine learning approaches from evolutionary computation to inductive declarative approaches.

SCIENTIFIC AND RESEARCH ACTIVITY

Leading of 2 regional research projects supported with public funds and 2 national thematic networks.

Advisor(co) of 5 PhD theses in Computer Science already defended

Advisor of 2 PhD theses in Computer Science already in progress (PhD project admitted and approved)

RESEARCH EVALUATION

Research evaluated with the concession of three “sexenios” (each of which evaluates the research performed during six years)

PUBLICATIONS

Co author of more than 50 international contributions (journals and conferences)